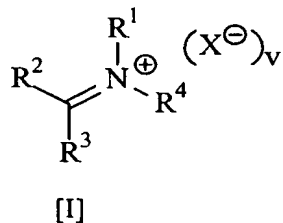


WHAT IS CLAIMED IS:

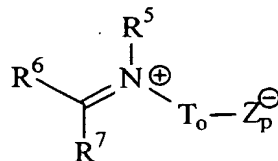
1. A bleaching composition comprising an organic catalyst compound wherein said organic catalyst compound is selected from the group consisting of organic catalyst compounds that exhibit an organic catalyst lifetime from greater than or equal to 15 seconds to less than or equal to 15 minutes.
2. The bleaching composition as claimed in Claim 1 wherein said organic catalyst compound is selected from the group consisting of organic catalyst compounds that exhibit an organic catalyst lifetime of from greater than or equal to 30 seconds to less than or equal to 12 minutes.
3. The bleaching composition as claimed in Claim 1 wherein said organic catalyst compound is selected from the group consisting of organic catalyst compounds that exhibit an organic catalyst lifetime of from greater than or equal to 1 minute to less than or equal to 10 minutes.
4. The bleaching composition as claimed in Claim 1 wherein said organic catalyst compound is selected from the group consisting of organic catalyst compounds that exhibit an effective lifetime of from greater than or equal to 1 minute to less than or equal to 5 minutes.
5. The bleaching composition as claimed in Claim 1 wherein said organic catalyst compound is selected from the group consisting of:
 - a) aryliminium cations and aryliminium polyions, which have a net charge of from about +3 to about -3, that are represented by the formula [I]:



- where R²-R³ are independently selected from substituted or unsubstituted radicals selected from the group consisting of H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R¹ and R⁴ are radicals

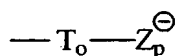
selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, alkoxy, keto and carboalkoxy radicals, provided that when R¹ or R⁴ is isopropyl, R² or R³ is not ArCOCH₃; X⁻ is a suitable charge-balancing counterion; v is an integer from 1 to 3;

- 5 b) aryliminium zwitterions, which have a net charge of from about +3 to about -3, that are represented by the formula [II]:



[II]

- 10 where R⁵-R⁷ are independently selected from substituted or unsubstituted radicals selected from the group consisting of H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; also present in this formula is the radical represented by the formula:

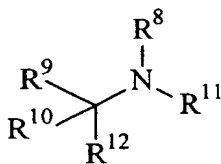


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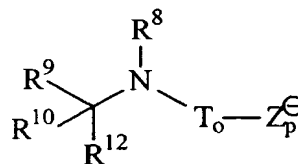
where Z_p⁻ is covalently bonded to T_o, and Z_p⁻ is selected from the group consisting of -CO₂⁻, -SO₃⁻, -OSO₃⁻, -SO₂⁻ and -OSO₂⁻ and p is either 1, 2 or 3; T_o is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated alkyl, cycloalkyl, aryl, alkaryl, aralkyl and heterocyclic ring;

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c) modified amines, which have a net charge of from about -3 to about +3, that are represented by formulas [V] and [VI]:



[V]

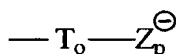


[VI]

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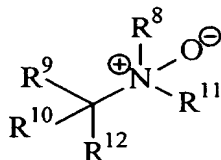
where R⁹-R¹⁰ are independently selected from substituted or unsubstituted radicals selected from the group consisting of H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals and anionic and/or

cationic charge carrying radicals; R^8 and R^{11} are radicals selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, alkoxy, keto and carboalkoxy radicals and anionic and/or cationic charge carrying radicals; R^{12} is a leaving group, the protonated form of which has a pK_a value (H_2O reference) that falls within the following range: $37 > pK_a > -2$; with the proviso that any R^8 - R^{12} , when present, may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; and the radical represented by the formula:

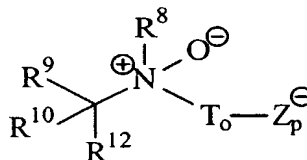


where Z_p^- is covalently bonded to T_o , and Z_p^- is selected from the group consisting of $-CO_2^-$, $-SO_3^-$, $-OSO_3^-$, $-SO_2^-$ and $-OSO_2^-$ and p is either 1, 2 or 3; T_o is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated alkyl, cycloalkyl, aryl, alkaryl, aralkyl, and heterocyclic ring;

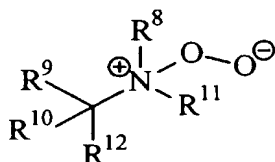
d) modified amine oxides, which have a net charge of from about -3 to about +3, that are represented by formulas [VII]-[X]:



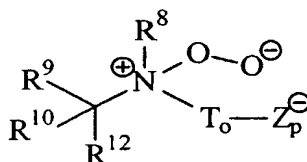
[VII]



[VIII]



[IX]



[X]

where R^8 - R^{10} are independently selected from substituted or unsubstituted radicals selected from the group consisting of H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals and anionic and/or cationic charge carrying radicals; R^{11} is a radical selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy

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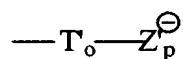
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where $R^{5'}$ - $R^{7'}$ are independently selected from substituted or unsubstituted radicals selected from the group consisting of H, alkyl, cycloalkyl, aryl, alkaryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; also present in this formula is the radical represented by the formula:

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where Z_p^{\ominus} is covalently bonded to T_o , and Z_p^{\ominus} is selected from the group consisting of $-CO_2^-$, $-SO_3^-$, $-OSO_3^-$, $-SO_2^-$ and $-OSO_2^-$ and p is either 1, 2 or 3; T_o is selected from the group consisting of substituted or unsubstituted, saturated or unsaturated alkyl, cycloalkyl, aryl, alkaryl, aralkyl, and heterocyclic ring; and

h) mixtures thereof.

6. The bleaching composition as claimed in claim 1 wherein said organic catalyst compound comprises from about 0.001% to about 10% by weight of said composition, and said peroxygen source, when present, comprises from about 0.01% to about 60% by weight of said composition.

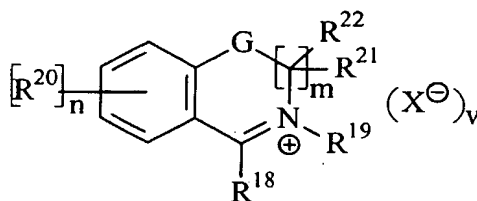
7. The bleaching composition as claimed in claim 1 wherein said peroxygen source, when present, is selected from the group consisting of:

20 (a) preformed peracid compounds selected from the group consisting of percarboxylic acids and salts, percarbonic acids and salts, perimidic acids and salts, peroxymonosulfuric acids and salts, and mixtures thereof;

(b) hydrogen peroxide sources selected from the group consisting of perborate compounds, percarbonate compounds, perphosphate compounds and mixtures thereof; and a
25 bleach activator.

8. The bleaching composition as claimed in claim 1 wherein said organic catalyst compound is selected from the group consisting of:

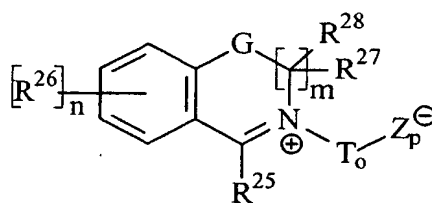
30 a) aryliminium cations and aryliminium polyions, which have a net charge of from about +3 to about -3, that are represented by the formula [XI]:



[XI]

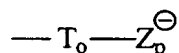
where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R²⁰ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R²⁰ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring, provided that when R¹⁹ is -CH(CH₃)₂, R²⁰ is not -COCH₃; R¹⁸ may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R¹⁹ is a radical selected from the group consisting of substituted or unsubstituted, saturated or unsaturated, H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl and heterocyclic ring; G is selected from the group consisting of: (1) -O-; (2) -N(R²³)-; and (3) -N(R²³R²⁴)-; R²¹-R²⁴ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, linear or branched C₁-C₁₂ alkyls, alkylenes, alkoxys, aryls, alkaryls, aralkyls, cycloalkyls, and heterocyclic rings; provided that any of R¹⁸, R¹⁹, R²⁰, R²¹-R²⁴ may be joined together with any other of R¹⁸, R¹⁹, R²⁰, R²¹-R²⁴ to form part of a common ring; any geminal R²¹-R²² may combine to form a carbonyl; any vicinal R²¹-R²⁴ may join to form unsaturation; and wherein any one group of substituents R²¹-R²⁴ may combine to form a substituted or unsubstituted fused unsaturated moiety; X⁻ is a suitable charge-balancing counterion; and v is an integer from 1 to 3;

b) aryliminium zwitterions, which have a net charge of from about +3 to about -3, that are represented by the formula [XII]:

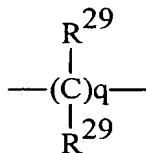


[XII]

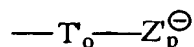
where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R²⁶ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R²⁶ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R²⁵ may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; also present in this formula is the radical represented by the formula:



where Z_p⁻ is covalently bonded to T_o, and Z_p⁻ is selected from the group consisting of -CO₂⁻, -SO₃⁻, -OSO₃⁻, -SO₂⁻ and -OSO₂⁻ and p is either 1, 2 or 3; T_o is selected from the group consisting of:

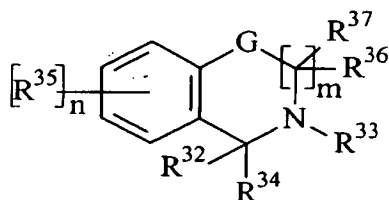


wherein q is an integer from 1 to 8; R²⁹ is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R²⁹ groups are not independently selected to be H; G is selected from the group consisting of: (1) -O-; (2) -N(R³⁰)-; and (3) -N(R³⁰R³¹)-; R²⁷, R²⁸, R³⁰ and R³¹ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R²⁵, R²⁶, R²⁷, R²⁸, R³⁰ and R³¹ may be joined together with any other of R²⁵, R²⁶, R²⁷, R²⁸, R³⁰ and R³¹ to form part of a common ring; any geminal R²⁷ - R²⁸ may combine to form a carbonyl; any vicinal R²⁷ - R³¹ may join to form unsaturation; and wherein any one group of substituents R²⁷ - R³¹ may combine to form a substituted or unsubstituted fused unsaturated moiety; and provided that the radical represented by the formula:

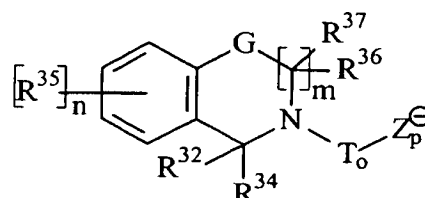


is not $\text{CH}_2\text{CH}(\text{OSO}_3^-)\text{R}^{41}$ wherein R^{41} is selected from the group consisting of geminal dimethyl substituted alkyl, unsubstituted alkyl and phenyl;

c) modified amines that are represented by the formulas [XV] and [XVI]:

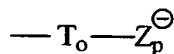


[XV]

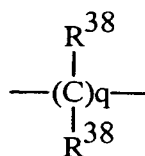


[XVI]

where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R^{35} is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R^{35} substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R^{32} may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R^{33} may be a substituted or unsubstituted, saturated or unsaturated, radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, and also present in this formula is the radical represented by the formula:



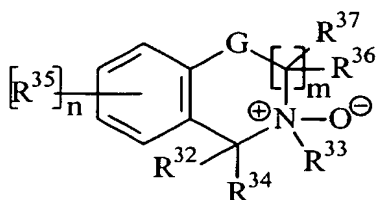
where Z_p^- is covalently bonded to T_o , and Z_p^- is selected from the group consisting of $-\text{CO}_2^-$, $-\text{SO}_3^-$, $-\text{OSO}_3^-$, $-\text{SO}_2^-$ and $-\text{OSO}_2^-$, and p is either 1, 2 or 3; T_o is selected from the group consisting of:



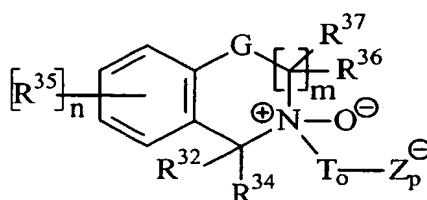
wherein q is an integer from 1 to 8; R^{38} is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R^{38} groups are not independently selected to be H; G is

selected from the group consisting of: (1) -O-; (2) -N(R³⁹)-; and (3) -N(R³⁹R⁴⁰)-; R³⁶, R³⁷, R³⁹ and R⁴⁰ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkenes, heterocyclic ring, alkoxy, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R³², R³³, R³⁴, R³⁵, R³⁶, R³⁷, R³⁹ and R⁴⁰ may be joined together with any other of R³², R³³, R³⁴, R³⁵, R³⁶, R³⁷, R³⁹ and R⁴⁰ to form part of a common ring; any geminal R³⁶, R³⁷ may combine to form a carbonyl; any vicinal R³⁶, R³⁷, R³⁹ and R⁴⁰ may join to form unsaturation; and wherein any one group of substituents R³⁶, R³⁷, R³⁹ and R⁴⁰ may combine to form a substituted or unsubstituted fused unsaturated moiety;

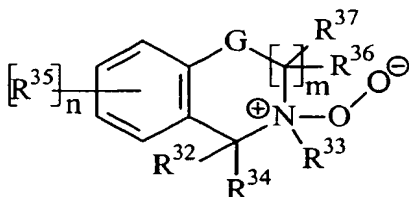
10 d) modified amine oxides that are represented by formulas [XVII]-[XX]:



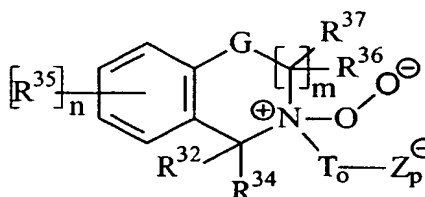
[XVII]



[XVIII]

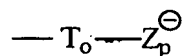


[XIX]

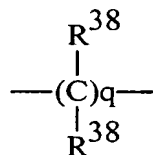


[XX]

where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R³⁵ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R³⁵ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R³² may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R³³ may be a substituted or unsubstituted, saturated or unsaturated, radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, and also present in this formula is the radical represented by the formula:



where Z_p^{\ominus} is covalently bonded to T_o , and Z_p^{\ominus} is selected from the group consisting of $-CO_2^{\ominus}$, $-SO_3^{\ominus}$, $-OSO_3^{\ominus}$, $-SO_2^{\ominus}$ and $-OSO_2^{\ominus}$, and p is either 1, 2 or 3; T_o is selected from the group consisting of:



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wherein q is an integer from 1 to 8; R^{38} is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R^{38} groups are not independently selected to be H; G is selected from the group consisting of: (1) $-O-$; (2) $-N(R^{39})-$; and (3) $-N(R^{39}R^{40})-$; R^{36} , R^{37} , R^{39} and R^{40} are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R^{32} , R^{33} , R^{34} , R^{35} , R^{36} , R^{37} , R^{39} and R^{40} may be joined together with any other of R^{32} , R^{33} , R^{34} , R^{35} , R^{36} , R^{37} , R^{39} and R^{40} to form part of a common ring; any geminal R^{36} - R^{37} may combine to form a carbonyl; any vicinal R^{36} , R^{37} , R^{39} and R^{40} may join to form unsaturation; and wherein any one group of substituents R^{36} , R^{37} , R^{39} and R^{40} may combine to form a substituted or unsubstituted fused unsaturated moiety;

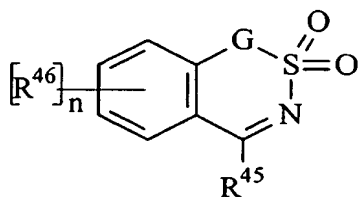
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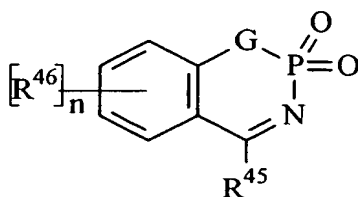
e) sulfonimines [XXVIIIa], phosphonimines [XXVIIIb], N-acylimines [XXIX] are

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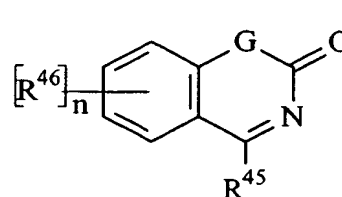
represented as follows:



[XXVIIIa]



[XXVIIIb]



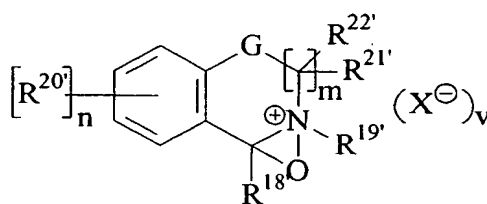
[XXIX]

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wherein each R^{46} is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R^{46} substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R^{45} may be a substituted or unsubstituted radical selected

from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; G, when present, is selected from the group consisting of: (1) -O-; (2) -N(R⁴⁷)-; and (3) -N(R⁴⁷R⁴⁸)-; R⁴⁷-R⁴⁸ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, linear or branched C₁-C₁₂ alkyls, alkenes, alkoxy, aryls, alkaryl, aralkyls, cycloalkyls, and heterocyclic rings;

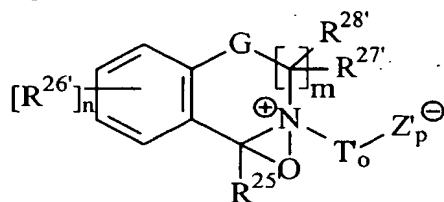
f) oxaziridinium cations and polyions, which have a net charge of from about +3 to about -3, that are represented by formula [XIII]:



[XIII]

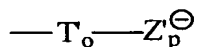
wherein m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R²⁰ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R²⁰ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R¹⁸ may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R¹⁹ may be a substituted or unsubstituted, saturated or unsaturated, radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl and heterocyclic ring; G is selected from the group consisting of: (1) -O-; (2) -N(R²³)-; and (3) -N(R²³R²⁴)-; R²¹-R²⁴ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, linear or branched C₁-C₁₂ alkyls, alkenes, alkoxy, aryls, alkaryl, aralkyls, cycloalkyls, and heterocyclic rings; provided that any of R¹⁸, R¹⁹, R²¹-R²⁴ may be joined together with any other of R¹⁸, R¹⁹, R²¹-R²⁴ to form part of a common ring; any geminal R²¹ - R²² may combine to form a carbonyl; any vicinal R²¹ - R²⁴ may join to form unsaturation; and wherein any one group of substituents R²¹ - R²⁴ may combine to form a substituted or unsubstituted fused unsaturated moiety; and wherein any one group of substituents R²¹ - R²⁴ may combine to form a substituted or unsubstituted fused unsaturated moiety; X⁻ is a suitable charge-balancing counterion; and v is an integer from 1 to 3;

g) oxaziridinium zwitterions, which have a net charge of from about +3 to about -3, that are represented by formula [XIV]:

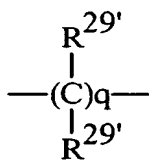


[XIV]

- 5 wherein m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each $R^{26'}$ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal $R^{26'}$ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; $R^{25'}$ may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; the radical represented by the formula:

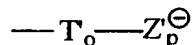


- 15 where Z_p^{\ominus} is covalently bonded to T_o , and Z_p^{\ominus} is selected from the group consisting of $-CO_2^-$, $-SO_3^-$, $-OSO_3^-$, $-SO_2^-$ and $-OSO_2^-$, and p is either 1 or 2; T_o is selected from the group consisting of:



- 20 wherein q is an integer from 1 to 8; $R^{29'}$ is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all $R^{29'}$ groups are not independently selected to be H; G is selected from the group consisting of: (1) $-O-$; (2) $-N(R^{30'})-$; and (3) $-N(R^{30'}R^{31'})-$; $R^{27'}$, $R^{28'}$, $R^{30'}$ and $R^{31'}$ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of $R^{25'}$, $R^{26'}$, $R^{27'}$,

R^{28'}, R^{30'} and R^{31'} may be joined together with any other of R^{25'}, R^{26'}, R^{27'}, R^{28'}, R^{30'} and R^{31'} to form part of a common ring; any geminal R^{27'}- R^{28'} may combine to form a carbonyl; any vicinal R^{27'}- R^{31'} may join to form unsaturation; and wherein any one group of substituents R^{27'}- R^{31'} may combine to form a substituted or unsubstituted fused unsaturated moiety; and
 5 provided that the radical represented by the formula:

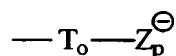


is not CH₂CH(OSO₃⁻)R⁴¹ wherein R⁴¹ is selected from the group consisting of geminal dimethyl substituted alkyl, unsubstituted alkyl and phenyl; and
 10 h) mixtures thereof.

9. The bleaching composition according to Claim 8 wherein said organic catalyst compound is selected from the group consisting of:

15 (a) aryliminium cations and aryliminium polyions having a net charge of from about +3 to about -3, as represented by the formula [XI], include those of formula [XI] where R¹⁸ is H or methyl, R¹⁹ is substituted or unsubstituted, saturated or unsaturated C₁ - C₁₄ alkyl or cycloalkyl, and R²⁰ is H;

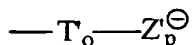
(b) aryliminium zwitterions having a net charge of from about +3 to about -3, as
 20 represented by the formula [XII], include those of formula [XII] where R²⁵ is H or methyl, and for the radical represented by the formula:



25 Z_p⁻ is -CO₂⁻, -SO₃⁻ or -OSO₃⁻, and p is 1 or 2;

(c) oxaziridinium cations and oxaziridinium polyions having a net charge of from about +3 to about -3, as represented by the formula [XIII], include those of formula [XIII] where R^{18'} is H or methyl, R^{19'} is substituted or unsubstituted, saturated or unsaturated, C₁ - C₁₄ alkyl or cycloalkyl, and R^{20'} is H;

30 (d) aryliminium zwitterions having a net charge of from about +3 to about -3, as represented by the formula [XIV], include those of formula [XIV] where R^{25'} is H or methyl, and for the radical represented by the formula:



35

Z_p^- is $-\text{CO}_2^-$, $-\text{SO}_3^-$ or $-\text{OSO}_3^-$, and p is 1 or 2;

(e) modified amines as represented by the formulas [XV] and [XVI] wherein the modified amines have a net charge of about +1 to about -1 and wherein R^{32} is H and/or Z_p^- is $-\text{CO}_2^-$, $-\text{SO}_3^-$, or $-\text{OSO}_3^-$; and

5 (f) modified amine oxides as represented by the formulas [XVII]-[XX] wherein the modified amine oxides have a net charge of about +1 to about -1 and wherein R^{32} is H and/or Z_p^- is $-\text{CO}_2^-$, $-\text{SO}_3^-$, or $-\text{OSO}_3^-$.

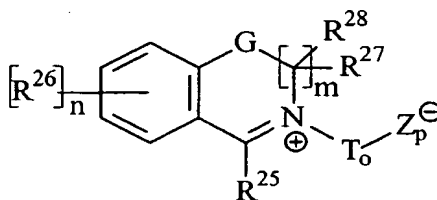
10 10. The bleaching composition as claimed in claim 1 wherein said bleaching composition further comprises a surfactant.

11. The bleaching composition as claimed in claim 1 wherein said bleaching composition further comprises an enzyme.

15 12. The bleaching composition as claimed in claim 1 wherein said bleaching composition further comprises a chelating agent.

13. An organic catalyst compound selected from the group consisting of:

20 a) aryliminium zwitterions, which have a net charge of from about +3 to about -3, that are represented by the formula [XII]:



[XII]

25 where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R^{26} is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R^{26} substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R^{25} may be a substituted or unsubstituted radical selected

from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; also present in this formula is the radical represented by the formula:



where Z_p^{\ominus} is covalently bonded to T_o , and Z_p^{\ominus} is selected from the group consisting of $-CO_2^{\ominus}$, $-SO_3^{\ominus}$, $-OSO_3^{\ominus}$, $-SO_2^{\ominus}$ and $-OSO_2^{\ominus}$ and p is either 1, 2 or 3; T_o is selected from the group consisting of:



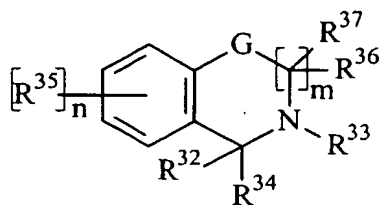
wherein q is an integer from 1 to 8; R^{29} is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R^{29} groups are not independently selected to be H; G is selected from the group consisting of: (1) $-O-$; (2) $-N(R^{30})-$; and (3) $-N(R^{30}R^{31})-$; R^{27} , R^{28} , R^{30} and R^{31} are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R^{25} , R^{26} , R^{27} , R^{28} , R^{30} and R^{31} may be joined together with any other of R^{25} , R^{26} , R^{27} , R^{28} , R^{30} and R^{31} to form part of a common ring; any geminal $R^{27} - R^{28}$ may combine to form a carbonyl; any vicinal $R^{27} - R^{31}$ may join to form unsaturation; and wherein any one group of substituents $R^{27} - R^{31}$ may combine to form a substituted or unsubstituted fused unsaturated moiety; and provided that the radical represented by the formula:



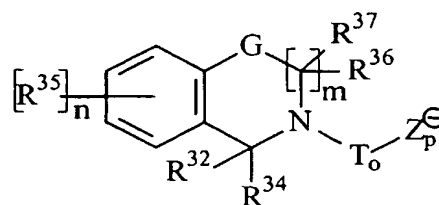
is not $CH_2CH(OSO_3^-)R^{41}$ wherein R^{41} is selected from the group consisting of geminal dimethyl substituted alkyl, unsubstituted alkyl and phenyl;

b) modified amines that are represented by the formulas [XV] and [XVI]:

30

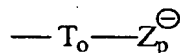


[XV]

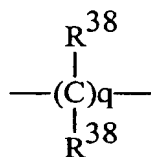


[XVI]

where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R³⁵ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R³⁵ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R³² may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R³³ may be a substituted or unsubstituted, saturated or unsaturated, radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, and also present in this formula is the radical represented by the formula:



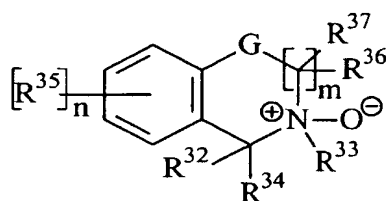
where Z_p⁻ is covalently bonded to T_o, and Z_p⁻ is selected from the group consisting of -CO₂⁻, -SO₃⁻, -OSO₃⁻, -SO₂⁻ and -OSO₂⁻, and p is either 1, 2 or 3; T_o is selected from the group consisting of:



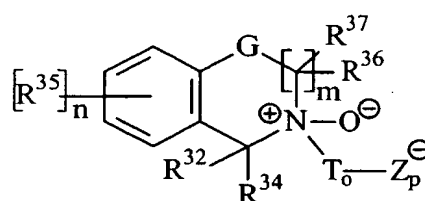
wherein q is an integer from 1 to 8; R³⁸ is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R³⁸ groups are not independently selected to be H; G is selected from the group consisting of: (1) -O-; (2) -N(R³⁹)-; and (3) -N(R³⁹R⁴⁰)-; R³⁶, R³⁷, R³⁹ and R⁴⁰ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R³², R³³, R³⁴,

R³⁵, R³⁶, R³⁷, R³⁹ and R⁴⁰ may be joined together with any other of R³², R³³, R³⁴, R³⁵, R³⁶, R³⁷, R³⁹ and R⁴⁰ to form part of a common ring; any geminal R³⁶-R³⁷ may combine to form a carbonyl; any vicinal R³⁶, R³⁷, R³⁹ and R⁴⁰ may join to form unsaturation; and wherein any one group of substituents R³⁶, R³⁷, R³⁹ and R⁴⁰ may combine to form a substituted or unsubstituted fused unsaturated moiety;

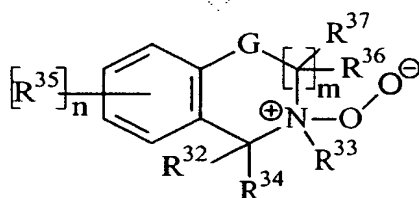
c) modified amine oxides that are represented by formulas [XVII]-[XX]:



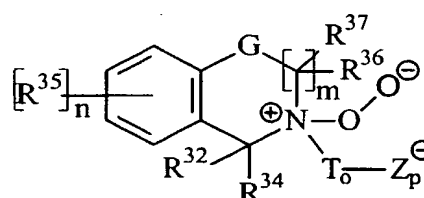
[XVII]



[XVIII]

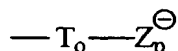


[XIX]

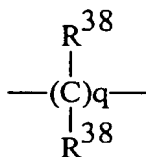


[XX]

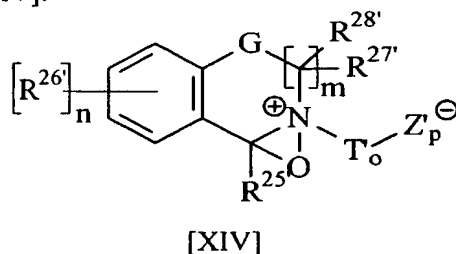
where m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each R³⁵ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal R³⁵ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; R³² may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; R³³ may be a substituted or unsubstituted, saturated or unsaturated, radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, and also present in this formula is the radical represented by the formula:



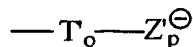
where Z_p⁻ is covalently bonded to T_o, and Z_p⁻ is selected from the group consisting of -CO₂⁻, -SO₃⁻, -OSO₃⁻, -SO₂⁻ and -OSO₂⁻, and p is either 1, 2 or 3; T_o is selected from the group consisting of:



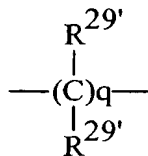
- wherein q is an integer from 1 to 8; R^{38} is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all R^{38} groups are not independently selected to be H; G is selected from the group consisting of: (1) $-\text{O}-$; (2) $-\text{N}(\text{R}^{39})-$; and (3) $-\text{N}(\text{R}^{39}\text{R}^{40})-$; R^{36} , R^{37} , R^{39} and R^{40} are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of R^{32} , R^{33} , R^{34} , R^{35} , R^{36} , R^{37} , R^{39} and R^{40} may be joined together with any other of R^{32} , R^{33} , R^{34} , R^{35} , R^{36} , R^{37} , R^{39} and R^{40} to form part of a common ring; any geminal R^{36} - R^{37} may combine to form a carbonyl; any vicinal R^{36} , R^{37} , R^{39} and R^{40} may join to form unsaturation; and wherein any one group of substituents R^{36} , R^{37} , R^{39} and R^{40} may combine to form a substituted or unsubstituted fused unsaturated moiety;
- d) oxaziridinium zwitterions, which have a net charge of from about +3 to about -3, that are represented by formula [XIV]:



- wherein m is 1 to 3 when G is present and m is 1 to 4 when G is not present; and n is an integer from 0 to 4; each $\text{R}^{26'}$ is independently selected from a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, aryl, fused aryl, heterocyclic ring, fused heterocyclic ring, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals, and any two vicinal $\text{R}^{26'}$ substituents may combine to form a fused aryl, fused carbocyclic or fused heterocyclic ring; $\text{R}^{25'}$ may be a substituted or unsubstituted radical selected from the group consisting of H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, heterocyclic ring, silyl, nitro, halo, cyano, sulfonato, alkoxy, keto, carboxylic, and carboalkoxy radicals; the radical represented by the formula:



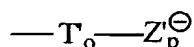
where Z_p^{\ominus} is covalently bonded to T_o , and Z_p^{\ominus} is selected from the group consisting of $-CO_2^-$, $-SO_3^-$, $-OSO_3^-$, $-SO_2^-$ and $-OSO_2^-$, and p is either 1 or 2; T_o is selected from the group consisting of:



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wherein q is an integer from 1 to 8; $R^{29'}$ is independently selected from substituted or unsubstituted radicals selected from the group consisting of linear or branched H, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylene, heterocyclic ring, alkoxy, arylcarbonyl, carboxyalkyl and amide groups, provided that all $R^{29'}$ groups are not independently selected to be H; G is selected from the group consisting of: (1) $-O-$; (2) $-N(R^{30'})-$; and (3) $-N(R^{30'}R^{31'})-$; $R^{27'}$, $R^{28'}$, $R^{30'}$ and $R^{31'}$ are substituted or unsubstituted radicals independently selected from the group consisting of H, oxygen, alkyl, cycloalkyl, alkaryl, aryl, aralkyl, alkylenes, heterocyclic ring, alkoxys, arylcarbonyl groups, carboxyalkyl groups and amide groups; any of $R^{25'}$, $R^{26'}$, $R^{27'}$, $R^{28'}$, $R^{30'}$ and $R^{31'}$ may be joined together with any other of $R^{25'}$, $R^{26'}$, $R^{27'}$, $R^{28'}$, $R^{30'}$ and $R^{31'}$ to form part of a common ring; any geminal $R^{27'}$ - $R^{28'}$ may combine to form a carbonyl; any vicinal $R^{27'}$ - $R^{31'}$ may join to form unsaturation; and wherein any one group of substituents $R^{27'}$ - $R^{31'}$ may combine to form a substituted or unsubstituted fused unsaturated moiety; and provided that the radical represented by the formula:

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is not $CH_2CH(OSO_3^-)R^{41}$ wherein R^{41} is selected from the group consisting of geminal dimethyl substituted alkyl, unsubstituted alkyl and phenyl; and

25

e) mixtures thereof.

14. A method for laundering a fabric in need of laundering, said method comprises contacting said fabric with a laundry solution having a bleaching composition according to claim 1.

30

15. A laundry additive product comprising a bleaching composition according to claim 1.

16. A laundry additive product comprising a bleaching composition according to claim 8.

17. A laundry additive product comprising an organic catalyst compound according to claim 13.
- 5 18. The laundry additive product as claimed in claim 15 wherein said laundry additive product is in a dosage form selected from the group consisting of a pill, tablet, caplet, gelcap or other single dosage form.
- 10 19. The laundry additive product as claimed in claim 16 wherein said laundry additive product is in a dosage form selected from the group consisting of a pill, tablet, caplet, gelcap or other single dosage form.
- 15 20. The laundry additive product as claimed in claim 17 wherein said laundry additive product is in a dosage form selected from the group consisting of a pill, tablet, caplet, gelcap or other single dosage form.
21. The laundry additive product as claimed in claim 15 wherein said laundry additive further includes a suitable carrier.

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